

Marius Ungarish

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

83 papers	1,067 citations	17 h-index	29 g-index
90 ext. papers	1,202 ext. citations	3.3 avg, IF	4.77 L-index

#	Paper	IF	Citations
83	An Introduction to Gravity Currents and Intrusions		150
82	On gravity currents propagating at the base of a stratified ambient. <i>Journal of Fluid Mechanics</i> , 2002 , 458, 283-301	3.7	54
81	On gravity currents in a linearly stratified ambient: a generalization of Benjamin's steady-state propagation results. <i>Journal of Fluid Mechanics</i> , 2006 , 548, 49	3.7	51
80	Axisymmetric gravity currents in a rotating system: experimental and numerical investigations. <i>Journal of Fluid Mechanics</i> , 2001 , 447, 1-29	3.7	50
79	The effects of rotation on axisymmetric gravity currents. <i>Journal of Fluid Mechanics</i> , 1998 , 362, 17-51	3.7	43
78	Intrusive gravity currents in a stratified ambient: shallow-water theory and numerical results. <i>Journal of Fluid Mechanics</i> , 2005 , 535, 287-323	3.7	36
77	Particle-driven gravity currents: asymptotic and box model solutions. <i>European Journal of Mechanics, B/Fluids</i> , 2000 , 19, 139-165	2.4	35
76	On the axisymmetric spreading of non-Newtonian power-law gravity currents of time-dependent volume: An experimental and theoretical investigation focused on the inference of rheological parameters. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013 , 201, 69-79	2.7	34
75	High-Reynolds-number gravity currents over a porous boundary: shallow-water solutions and box-model approximations. <i>Journal of Fluid Mechanics</i> , 2000 , 418, 1-23	3.7	27
74	Spin-up from rest in a stratified fluid: boundary flows. <i>Journal of Fluid Mechanics</i> , 2002 , 472, 51-82	3.7	25
73	A shallow-water model for high-Reynolds-number gravity currents for a wide range of density differences and fractional depths. <i>Journal of Fluid Mechanics</i> , 2007 , 579, 373-382	3.7	24
72	On gravity currents propagating at the base of a stratified ambient: effects of geometrical constraints and rotation. <i>Journal of Fluid Mechanics</i> , 2004 , 521, 69-104	3.7	24
71	A general solution of Benjamin-type gravity current in a channel of non-rectangular cross-section. <i>Environmental Fluid Mechanics</i> , 2012 , 12, 251-263	2.2	22
70	Energy balances for propagating gravity currents: homogeneous and stratified ambients. <i>Journal of Fluid Mechanics</i> , 2006 , 565, 363	3.7	21
69	Two-layer shallow-water dam-break solutions for non-Boussinesq gravity currents in a wide range of fractional depth. <i>Journal of Fluid Mechanics</i> , 2011 , 675, 27-59	3.7	20
68	The propagation of gravity currents in a V-shaped triangular cross-section channel: experiments and theory. <i>Journal of Fluid Mechanics</i> , 2014 , 754, 232-249	3.7	19
67	On gravity currents in stratified ambients. <i>Physics of Fluids</i> , 2007 , 19, 086602	4.4	19

66	Sustained gravity currents in a channel. <i>Journal of Fluid Mechanics</i> , 2016 , 798, 853-888	3.7	17
65	Two-layer shallow-water dam-break solutions for gravity currents in non-rectangular cross-area channels. <i>Journal of Fluid Mechanics</i> , 2013 , 732, 537-570	3.7	16
64	A numerical investigation of high-Reynolds-number constant-volume non-Boussinesq density currents in deep ambient. <i>Journal of Fluid Mechanics</i> , 2011 , 673, 574-602	3.7	15
63	Axisymmetric gravity currents at high Reynolds number: On the quality of shallow-water modeling of experimental observations. <i>Physics of Fluids</i> , 2007 , 19, 036602	4.4	15
62	The propagation of gravity currents in a circular cross-section channel: experiments and theory. <i>Journal of Fluid Mechanics</i> , 2015 , 764, 513-537	3.7	14
61	The motion generated by a slowly rising disk in an unbounded rotating fluid for arbitrary Taylor number. <i>Journal of Fluid Mechanics</i> , 1994 , 262, 1-26	3.7	14
60	On axisymmetric rotating gravity currents: two-layer shallow-water and numerical solutions. <i>Journal of Fluid Mechanics</i> , 2003 , 481, 37-66	3.7	13
59	Gravity currents in a two-layer stratified ambient: The theory for the steady-state (front condition) and lock-released flows, and experimental confirmations. <i>Physics of Fluids</i> , 2012 , 24, 026601	4.4	12
58	Gravity currents in non-rectangular cross-section channels: Analytical and numerical solutions of the one-layer shallow-water model for high-Reynolds-number propagation. <i>Physics of Fluids</i> , 2013 , 25, 026601	4.4	12
57	Energy balances for gravity currents with a jump at the interface produced by lock release. <i>Acta Mechanica</i> , 2010 , 211, 1-21	2.1	12
56	The motion of a rising disk in a rotating axially bounded fluid for large Taylor number. <i>Journal of Fluid Mechanics</i> , 1995 , 291, 1-32	3.7	12
55	Gravity currents and intrusions of stratified fluids into a stratified ambient. <i>Environmental Fluid Mechanics</i> , 2012 , 12, 115-132	2.2	11
54	On axisymmetric intrusive gravity currents in a stratified ambient: Shallow-water theory and numerical results. <i>European Journal of Mechanics, B/Fluids</i> , 2007 , 26, 220-235	2.4	11
53	Energy balances and front speed conditions of two-layer models for gravity currents produced by lock release. <i>Acta Mechanica</i> , 2008 , 201, 63-81	2.1	11
52	Gravity currents in a linearly stratified ambient fluid created by lock release and influx in semi-circular and rectangular channels. <i>Physics of Fluids</i> , 2016 , 28, 096602	4.4	11
51	Gravity currents produced by constant and time varying inflow in a circular cross-section channel: Experiments and theory. <i>Advances in Water Resources</i> , 2016 , 90, 10-23	4.7	10
50	On inwardly propagating high-Reynolds-number axisymmetric gravity currents. <i>Journal of Fluid Mechanics</i> , 2003 , 494, 255-274	3.7	10
49	The propagation of particulate gravity currents in a V-shaped triangular cross section channel: Lock-release experiments and shallow-water numerical simulations. <i>Physics of Fluids</i> , 2016 , 28, 036601	4.4	10

48	An experimental investigation of spin-up from rest of a stratified fluid. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2004 , 98, 277-296	1.4	9
47	Particle Entrainment in a Bounded Rotating Flow With a Drain. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1998 , 120, 676-679	2.1	9
46	Models of internal jumps and the fronts of gravity currents: unifying two-layer theories and deriving new results. <i>Journal of Fluid Mechanics</i> , 2018 , 846, 654-685	3.7	8
45	Front conditions of high-Re gravity currents produced by constant and time-dependent influx: An analytical and numerical study. <i>European Journal of Mechanics, B/Fluids</i> , 2013 , 41, 109-122	2.4	8
44	Energy balances for axisymmetric gravity currents in homogeneous and linearly stratified ambients. <i>Journal of Fluid Mechanics</i> , 2008 , 616, 303-326	3.7	7
43	The flow field and bare-spot formation in spin-up from rest of a two-layer fluid about a vertical axis. <i>Journal of Fluid Mechanics</i> , 2003 , 474, 117-145	3.7	7
42	Axisymmetric compressible flow in a rotating cylinder with axial convection. <i>Journal of Fluid Mechanics</i> , 1985 , 154, 121-144	3.7	7
41	Gravity currents produced by lock-release: Theory and experiments concerning the effect of a free top in non-Boussinesq systems. <i>Advances in Water Resources</i> , 2018 , 121, 456-471	4.7	7
40	On gravity currents of fixed volume that encounter a down-slope or up-slope bottom. <i>Physics of Fluids</i> , 2019 , 31, 096604	4.4	6
39	Thin-layer models for gravity currents in channels of general cross-section area, a review. <i>Environmental Fluid Mechanics</i> , 2018 , 18, 283-333	2.2	6
38	On the propagation of particulate gravity currents in circular and semi-circular channels partially filled with homogeneous or stratified ambient fluid. <i>Physics of Fluids</i> , 2017 , 29, 106605	4.4	6
37	The motion generated by a rising particle in a rotating fluid [numerical solutions. Part 2. The long container case. <i>Journal of Fluid Mechanics</i> , 2002 , 454, 345-364	3.7	6
36	The motion generated by a rising particle in a rotating fluid [numerical solutions. Part 1. A short container. <i>Journal of Fluid Mechanics</i> , 2000 , 413, 111-148	3.7	6
35	Axisymmetric gravity currents in two-layer density-stratified media. <i>Environmental Fluid Mechanics</i> , 2015 , 15, 1035-1051	2.2	5
34	On the self-similar propagation of gravity currents through an array of emergent vegetation-like obstacles. <i>Physics of Fluids</i> , 2016 , 28, 056605	4.4	5
33	Benjamin's gravity current into an ambient fluid with an open surface. <i>Journal of Fluid Mechanics</i> , 2017 , 825,	3.7	5
32	A non-dissipative solution of Benjamin-type gravity current for a wide range of depth ratios. <i>Journal of Fluid Mechanics</i> , 2011 , 682, 54-65	3.7	5
31	The propagation of high-Reynolds-number non-Boussinesq gravity currents in axisymmetric geometry. <i>Journal of Fluid Mechanics</i> , 2010 , 643, 267-277	3.7	5

30	On the separation of a suspension in a tube centrifuge: critical comments on theoretical models and experimental verifications. <i>Archive of Applied Mechanics</i> , 2003 , 73, 399-408	2.2	5
29	Spin-up from rest of a mixture. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990 , 2, 160-166		5
28	On shear layers in mixture separation in rotating containers with inclined walls. <i>Journal of Fluid Mechanics</i> , 1988 , 193, 27	3.7	5
27	Propagation of a continuously supplied gravity current head down bottom slopes. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	5
26	Shallow-water solutions for gravity currents in non-rectangular cross-area channels with stratified ambient. <i>Environmental Fluid Mechanics</i> , 2015 , 15, 793-820	2.2	4
25	Inertial gravity current produced by the drainage of a cylindrical reservoir from an outer or inner edge. <i>Journal of Fluid Mechanics</i> , 2019 , 874, 185-209	3.7	4
24	Gravity currents with double stratification: a numerical and analytical investigation. <i>Environmental Fluid Mechanics</i> , 2014 , 14, 471-499	2.2	4
23	Some shear-layer and inertial modifications to the geostrophic drag on a slowly rising particle or drop in a rotating fluid. <i>Journal of Fluid Mechanics</i> , 1996 , 319, 219	3.7	4
22	Side wall effects in centrifugal separation of mixtures. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989 , 1, 810-818		4
21	On the front conditions for gravity currents in channels of general cross-section. <i>Environmental Fluid Mechanics</i> , 2016 , 16, 747-775	2.2	3
20	On the coupling between spin-up and aspect ratio of vortices in rotating stratified flows: a predictive model. <i>Journal of Fluid Mechanics</i> , 2015 , 777, 461-481	3.7	3
19	Gravity currents with tailwaters in Boussinesq and non-Boussinesq systems: two-layer shallow-water dam-break solutions and Navier-Stokes simulations. <i>Environmental Fluid Mechanics</i> , 2014 , 14, 451-470	2.2	3
18	The flow of high-Reynolds axisymmetric gravity currents of a stratified fluid into a stratified ambient: shallow-water and box model solutions. <i>Environmental Fluid Mechanics</i> , 2012 , 12, 347-359	2.2	3
17	Non-Boussinesq gravity currents and surface waves generated by lock release in a circular-section channel: theoretical and experimental investigation. <i>Journal of Fluid Mechanics</i> , 2019 , 869, 610-633	3.7	2
16	A novel hybrid model for the motion of sustained axisymmetric gravity currents and intrusions. <i>European Journal of Mechanics, B/Fluids</i> , 2015 , 49, 108-120	2.4	2
15	Draining of a thin film on the wall of a conical container set into rapid rotation about its vertical axis. <i>Physics of Fluids</i> , 2012 , 24, 023602	4.4	2
14	Gravity Currents and Intrusions 2020 ,		2
13	Sustained axisymmetric intrusions in a rotating system. <i>European Journal of Mechanics, B/Fluids</i> , 2016 , 56, 110-119	2.4	2

12	Benjamin's gravity current into an ambient fluid with an open surface in a channel of general cross-section. <i>Journal of Fluid Mechanics</i> , 2019 , 859, 972-991	3.7	2
11	Rotating planar gravity currents at moderate Rossby numbers: fully resolved simulations and shallow-water modelling. <i>Journal of Fluid Mechanics</i> , 2019 , 867, 114-145	3.7	1
10	Critical regime of gravity currents flowing in non-rectangular channels with density stratification. <i>Journal of Fluid Mechanics</i> , 2018 , 840, 579-612	3.7	1
9	The flow of an axisymmetric stratified gravity current into a stratified ambient in a rotating system. <i>Environmental Fluid Mechanics</i> , 2013 , 13, 337-351	2.2	1
8	An analogy of Taylor's instability criterion in Couette and rotating-magnetic-field-driven flows. <i>Physics of Fluids</i> , 2012 , 24, 011704	4.4	1
7	A model for the propagation of inertial gravity currents released from a two-layer stratified lock. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	1
6	Development of supercritical motion and internal jumps within lock-release radial currents and draining flows. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	1
5	Tailwater gravity currents and their connection to perfectly subcritical flow: laboratory experiments and shallow-water and direct numerical solutions. <i>Environmental Fluid Mechanics</i> , 2020 , 20, 1141-1171	2.2	0
4	Experimental verification of theoretical approaches for radial gravity currents draining from an edge. <i>Acta Mechanica</i> , 2021 , 232, 4461	2.1	0
3	Gravity currents with internal stratification in channels of non-rectangular cross-section. <i>European Journal of Mechanics, B/Fluids</i> , 2021 , 89, 83-92	2.4	0
2	A steady-state model for asymmetric intrusive gravity currents in a linearly stratified ambient. <i>Environmental Fluid Mechanics</i> , 2011 , 11, 231-246	2.2	
1	Numerical investigation of the spin-up of a two-layer fluid. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2001 , 81, 479-480	1	